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Circuits and Systems, 2004. ISCAS '04. Proceedings of the 2004 International
Volume 2, 23-26 May 2004 Page(s):II - 549-52 Vol.2

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☐   2. **A methodology for dynamic power consumption estimation using VHDL**
Alcantara, J.M.S.; Vieira, A.C.C.; Galvez-Durand, F.; Alves, V.C.;
Integrated Circuits and Systems Design, 2002. Proceedings. 15th Symposium
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Digital Object Identifier 10.1109/SBCCI.2002.1137651

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☐   3. **Leveraging the Multiprocessing Capabilities of Modern Network Process**
Cryptographic Acceleration
Gaubatz, G.; Sunar, B.;
Network Computing and Applications, Fourth IEEE International Symposium o
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Digital Object Identifier 10.1109/NCA.2005.28

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☐   4. **ASC: a stream compiler for computing with FPGAs**
Mencer, O.;
Computer-Aided Design of Integrated Circuits and Systems, IEEE Transaction
Volume 25, Issue 9, Sept. 2006 Page(s):1603 - 1617
Digital Object Identifier 10.1109/TCAD.2005.857377

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☐   5. **High performance encryption cores for 3G networks**
Balderas-Contreras, T.; Cumpliclo, R.;
Design Automation Conference, 2005. Proceedings. 42nd
13-17 June 2005 Page(s):240 - 243

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6. **Design and implementation of Rijndael algorithm for GSM encryption**
Soyjaudah, K.M.S.; Hosany, M.A.; Jamaloodeen, A.;
Mobile Future, 2004 and the Symposium on Trends in Communications. Symp
IST Workshop on
24-26 Oct. 2004 Page(s):106 - 109
Digital Object Identifier 10.1109/TIC.2004.1409510

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7. **An end-to-end hardware approach security for the GPRS**
Kitsos, P.; Sklavos, N.; Koufopavlou, O.;
Electrotechnical Conference, 2004. MELECON 2004. Proceedings of the 12th
Mediterranean
Volume 2, 2004 Page(s):791 - 794 Vol.2
Digital Object Identifier 10.1109/MELCON.2004.1347050

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8. **Design space exploration with A Stream Compiler**
Mencer, O.; Pearce, D.J.; Howes, L.W.; Luk, W.;
Field-Programmable Technology (FPT), 2003. Proceedings. 2003 IEEE Interna
Conference on
15-17 Dec. 2003 Page(s):270 - 277

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9. **Design and implementation of a private and public key crypto processor
application to a security system**
Ho Won Kim; Sunggu Lee;
Consumer Electronics, IEEE Transactions on
Volume 50, Issue 1, Feb 2004 Page(s):214 - 224
Digital Object Identifier 10.1109/TCE.2004.1277865

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10. **An efficient reuse-based approach to implement the 3GPP KASUMI block**
Balderas-Contreras, T.; Cumplido-Parra, R.A.;
Electrical and Electronics Engineering, 2004. (ICEEE). 1st International Confe
24-27 June 2004 Page(s):113 - 118
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1 Survey and benchmark of block ciphers for wireless sensor networks   ■
Yee Wei Law, Jeroen Doumen, Pieter Hartel
February 2006 **ACM Transactions on Sensor Networks (TOSN)**, Volume 2 Issue 1
Publisher: ACM Press
Full text available: ⬛ pdf(354.39 KB)   Additional Information: full citation, abstract, references, index terms

> Cryptographic algorithms play an important role in the security architecture of wireless sensor networks (WSNs). Choosing the most storage- and energy-efficient block cipher is essential, due to the facts that these networks are meant to operate without human intervention for a long period of time with little energy supply, and that available storage is scarce on these sensor nodes. However, to our knowledge, no systematic work has been done in this area so far. We construct an evaluation framew ...

> **Keywords**: Sensor networks, block ciphers, cryptography, energy efficiency

2 Architectures for cryptography and security applications: High performance   ■
encryption cores for 3G networks
Tomás Balderas-Contreras, René Cumplido
June 2005 **Proceedings of the 42nd annual conference on Design automation**
Publisher: ACM Press
Full text available: ⬛ pdf(869.33 KB)   Additional Information: full citation, abstract, references, index terms

> This paper presents two novel and high performance hardware architectures, implemented in FPGA technology, for the KASUMI block cipher; this algorithm lies at the core of the confidentiality and integrity algorithms defined for the Universal Mobile Telecommunication System (UMTS) standard. The first proposal is a pipelined design and the second implements an iterative approach. The throughput for these architectures turn out to be higher than the throughput achieved by other proposals.

> **Keywords**: 3G, FPGA, KASUMI, UMTS security architecture

3 Special session on security on SoC: Securing wireless data: system architecture   ▦
challenges
Srivaths Ravi, Anand Raghunathan, Nachiketh Potlapally
October 2002 **Proceedings of the 15th international symposium on System Synthesis**

Publisher: ACM Press

Full text available: 📄 pdf(172.35 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Security is critical to a wide range of current and future wireless data applications and services. This paper highlights the challenges posed by the need for security during system architecture design for wireless handsets, and provides an overview of emerging techniques to address them. We focus on the computational requirements for securing wireless data transactions, revealing a gap between these requirements and the trends in processing capabilities of embedded processors used in wireless h ...

Keywords: 3DES, AES, DES, IPSec, RSA, SSL, WTLS, decryption, design methodology, embedded system, encryption, handset, mobile computing, performance, platform, security, security processing, system architecture, wireless communications

4 <u>Taming the IXP network processor</u>   ▬

Lal George, Matthias Blume

May 2003 **ACM SIGPLAN Notices , Proceedings of the ACM SIGPLAN 2003 conference on Programming language design and implementation PLDI '03,** Volume 38 Issue 5

Publisher: ACM Press

Full text available: 📄 pdf(159.27 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>, <u>review</u>

We compile Nova, a new language designed for writing network processing applications, using a back end based on integer-linear programming (ILP) for register allocation, optimal bank assignment, and spills. The compiler's optimizer employs CPS as its intermediate representation; some of the invariants that this IR guarantees are essential for the formulation of a practical ILP model.Appel and George used a similar ILP-based technique for the IA32 to decide which variables reside in registers but ...

Keywords: Intel IXA, bank assignment, code generation, integer linear programming, network processors, programming languages, register allocation

5 <u>Dynamic Platform Management for Configurable Platform-Based System-on-Chips</u>   ▬

Krishna Sekar, Kanishka Lahiri, Sujit Dey

November 2003 **Proceedings of the 2003 IEEE/ACM international conference on Computer-aided design**

Publisher: IEEE Computer Society

Full text available: 📄 pdf(330.64 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>index terms</u>

General-purpose System-on-Chip platforms consistingof configurable components are emerging as an attractivealternative to traditional, customized solutions (e.g., ASICs,custom SoCs), owing to their flexibility, time-to-market advantage,and low engineering costs. However, the adoptionof such platforms in many high-volume markets (e.g, wirelesshandhelds) is limited by concerns about their performance andenergy-efficiency. This paper addresses the problemof enablingthe use of configurable platforms ...

6 <u>Document exchange model for augmenting added value of B2B collaboration</u>   ☐

Koichi Hayashi, Riichiro Mizoguchi

September 2003 **Proceedings of the 5th international conference on Electronic commerce ICEC '03**

Publisher: ACM Press

Full text available: 📄 pdf(148.98 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>

In this paper we present a B2B integration project, which aims to augment the added value of services instead of improving efficiency by automating processes. This paper introduces the VAlue Layered docUment Exchange (VALUE) model, which is a novel collaboration model adopted for this project. The key feature of the VALUE model is that partners exchange XML documents that are updated by adding elements for process information, such as the acceptance or rejection of a proposal, to received docume ...

Keywords: B2B, ebXML, supply chain management

7   A Logic Level Design Methodology for a Secure DPA Resistant ASIC or FPGA   ☐
Implementation
Kris Tiri, Ingrid Verbauwhede
February 2004 **Proceedings of the conference on Design, automation and test in Europe - Volume 1**
Publisher: IEEE Computer Society
Full text available: pdf(143.96 KB)   Additional Information: full citation, abstract, citings, index terms

This paper describes a novel design methodology to implement a secure DPA resistant crypto processor. The methodology is suitable for integration in a common automated standard cell ASIC or FPGA design flow. The technique combines standard building blocks to make new compound standard cells, which have a close to constant power consumption. Experimental results indicate a 50 times reduction in the power consumption fluctuations.

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